

## ABSTRACT OF THE DISCLOSURE

The apparatus controls a tilt angle of a tilt mirror  
5 in high speed with high stability, realizing non-linearity  
compensation. The apparatus includes: a control signal  
producing unit, which produces a control signal, for  
feed-forward controlling of the mirror into a target tilt  
angle, based on a parameter that determines the target tilt  
10 angle; a digital filter for removing a resonance frequency  
component, which is caused by an angle response of the tilt  
mirror, in the control signal, which is produced by the control  
signal producing unit; and a square root calculating unit  
for performing digital square-root calculation so that  
15 non-linearity of the control signal, from which the resonance  
frequency component has been removed, is compensated for.